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A roadmap for resilience to digital disruption in micro and small enterprises

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Abstract: This paper is concerned with designing a practical roadmap for micro- and small enterprises to build resilience to digital disruption. The paper is based on theoretical studies of strategic management, innovation management, design theory and theories on digital disruption from which two initial models of resilience to digital disruption for MSE is proposed. These models are based on the general observation that MSE are likely to fall victims to digital disruption because of their lack of strategic horizon, innovation capacity and agility. Because of this, a new and more dynamic framework well suited for MSE is proposed in the paper. This framework however needs to be further developed into a practical roadmap for resilience to digital disruption and tested empirically which is intended to be the next step of this research. The paper therefore concludes with the outline of a few specific areas for desired feedback.

Keywords: Digital Disruption; Sustainable Success; Strategic Innovation; Micro Enterprises; Small Enterprises; Technology; Production Industry; Service Industry; Roadmap; Resilience to Disruption.

1. Area of interest, background and research question

The area of interest in this paper is resilience to digital disruption in MSE (Micro and small sized companies). It seems clear that, to some extent, MSE find it difficult to tackle disruptive innovation; specifically, in regard to digital disruption, which we define as disruption in the digital domain. In this paper, we are concerned with companies that fall within traditional production and service

industries such as carpenters, tourist and leisure companies, hairdressers, small shops, bakers, butchers etc.

Our point of departure is, that within this MSE segment, focus on the daily operation of the company is simply too big and resources are too scarce to spend thinking about new processes, new products, new services, new ways of organising or, for that matter, simply staying abreast of the latest digital developments in their line of business. A large majority of business in Europe are MSE (98.7 %) which together employ approximately half (49.5 %) of the current workforce work here (Eurostat. European commission., 2011, p. 11).

This represents a challenge to the economy and business community at large. Companies in this demographic tend not to drive innovation, and, due to the combination of limited financial resources and a tendency towards developmental non-agility they are often particularly vulnerable to disruption themselves. This is especially a problem within business areas affected or reliant on particular digital technologies. For these reasons there is certainly a need to find new ways of *ramping up* as Rita McGrath describes it (McGrath, 2013).

This is further substantiated through the accelerating innovation cycles nurtured by rapid and accelerating digital development which has created a situation where one company's business foundation can quickly become eroded and obsolete (Parker, Van Alstyne and Choudary, 2016). This risk is not only limited to MSE's but can easily destabilize much larger companies as well; even though access to more resources, theoretically, makes them more resilient (Prahalad and Hamel, 1994; Christensen, 2013). Popular examples such as the streaming technology disruption of Blockbuster, the digital camera disruption of Kodak, and the smart phone disruption of Nokia seem to confirm this. However, not much attention has been given to the challenge of digital disruption for MSE. This paper is a attempt to remedy this lack.

2. Current understanding

Our initial understanding draws on an attempt to correlate literature from the following academic fields: business studies, strategic management, design thinking and innovation theory – including two PhD theses on this topic by the first and second author of this paper (Haslam, 2016; Smed, 2016). All of these theoretical traditions have contributed to our understanding of the area of interest. However, none tend to focus specifically on the actual operative elements necessary to building resilience to digital disruption in MSE.

We supplement this with a theoretical understanding of the term disruptive innovation which was coined by Christensen in the mid 90's (Bower & Christensen 1995, Christensen 1997, Christensen & Raynor 2003). The research on disruptive innovation has from its point of departure been driven by the key question 'why is success so difficult to sustain?' (Christensen 2016, p. ix). This

question, initially directed towards large enterprises, led to the following definition of disruption: '*Disruption describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent business.*' (Christensen et. al. 2015).

Although we agree with the above definition, we argue that the initial question is also relevant for MSE's, particularly regarding digital disruption, because the speed of diffusion of digital technologies is supposedly faster than ever (Kurzweil, 2005). We view digital disruptive technologies as separate from a specific solution (product or service). For example, we consider block-chain a disruptive technology, whereas bit-coin is a disruptive solution and not in itself a technology. The idea that small companies can effectively disrupt much larger competitors suggests that MSE have the potential to do more than simply follow in the innovative footsteps of larger companies. Similarly, since access to resources seems to be a non-determining factor in regard to disruptive ability it is also reasonable to assume that MSE can become just as resilient to disruption as larger companies. Arguably a dynamic, agile approach to strategic innovation seems to be needed.

3. Research Question & Design

It is reasonable to assume both MSE and larger mature companies (incumbents) would benefit from practical, strategic tools to navigate the rapid innovation climate nurtured by the swift development in consumer demand, production and not least the rise of potentially digital disruptive technologies. We propose the development of a 'resilience to digital disruption roadmap' specifically for MSE. Such a roadmap should specify, at a practical level, when, in which order and what needs to be decided and performed by MSE to increase their resilience and potentially move towards becoming a disruptor rather than the disrupted.

To this end, we put forward the following research question in this (research in progress) paper:

How do we identify operative elements of a 'resilience to digital disruption roadmap' for MSE's?

To address this question we are conducting our research in three stages. The first stage, which is the one reflected in this paper, is the development of a theoretical foundation based on a combination of strategic innovation and digital disruption. The second phase will be the development of a practical roadmap based on the theoretical models proposed in this paper (and perhaps other contributions). The third is the empirical application of the practical roadmap in specific contexts and iterative revisions of the proposed roadmap throughout this empirical phase. A test design for this needs to be developed.

4. Theoretical foundation

As aforementioned the theoretical foundation is twofold. Firstly, an understanding of digital disruption and the relation between digital disruptive technologies and solutions. Secondly, a conceptual understanding of innovation processes that leads to a potential digital disruption (of others).

Disruption is a movement in a market between the *disrupter* and the *disrupted*, where the disrupter moves up-market from its market foothold / niche on a faster trajectory than the disrupted.

By extension, it is always beneficial for a company, in this case MSE, to attempt to take the role of the disrupter. Consequently, a ‘resilience to digital disruption roadmap’ should lay out the necessary steps to potentially becoming a disrupter or part of a disruptive eco-system value network. This, in turn, requires a dynamic, strategic perspective – not counting out pure luck of course.

Our perspective on the strategic innovation process is drawn partially from a collaborative theoretical study on innovation barriers in MSME’s (micro-, small and medium-sized companies) (Haslam, 2016; Smed, 2016) in which a model was developed through a fusion of innovation and design theory which conceptualizes the innovation process. The result is a visual representation of what is coined strategic innovation (Figure 1). The model combines two iteration cycles: an inner cycle representing the four elements from the field of strategic planning, and an outer cycle representing the actual effects of the strategic process. Thus, the model represents the actualisation of ones’ capabilities to achieve specific goals, as well as a reflection on the strategic choice of said goals.

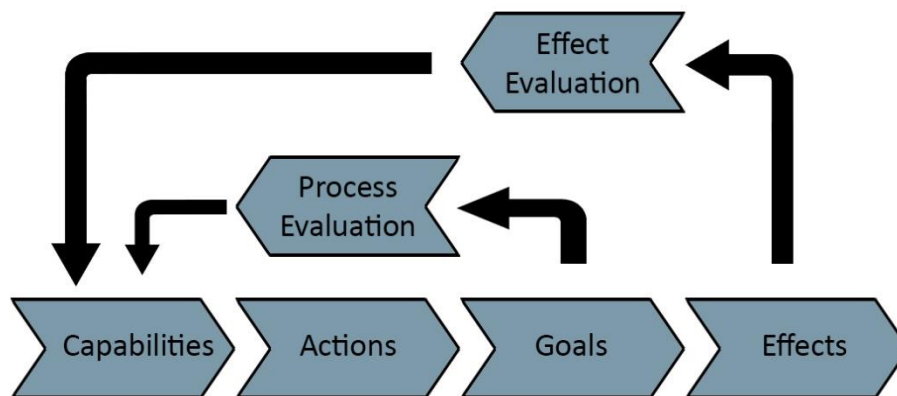


Figure 1 - Generic representation of strategic innovation processes. Model developed by the authors.

This representation implies, that strategic innovation, or the idea that companies can choose to work in a certain way that is more conducive to being consistently

innovative, is centred on specific areas of self-awareness. Firstly, being aware of the companies' capabilities and lack thereof. This is the foundation of setting realistic goals and being able to strategically seek out and engage in fruitful partnerships. Secondly, actually setting strategic goals which, combined with a realistic understanding of ones' capabilities in turn allows for the precise planning of specific actions required to attain these goals as well as the ability to properly evaluate these actions. Thirdly, the perspective or methodological awareness to reflect on the choice of strategic goals. This in turn relies on a higher level of external awareness regarding market changes, emerging technologies, competitors and competitive advantages. X

This is developed further in a second model from the same Ph.D. studies (Haslam, 2016; Smed, 2016) which delves deeper into the dynamics of the inner iteration cycle in particular. Breaking it down into standardised elements with a specific relation to one another creates an integrated system of elements in the innovation process, which can give a company a tool to reflect upon the way it deals with innovation. This model was actually developed because of a feeling of frustration about the seemingly endless ideas of what innovation is (Crossan and Apaydin, 2010). The processes and actions the company carries out can be translated into the model and thus create more awareness in a company of how to approach innovation.

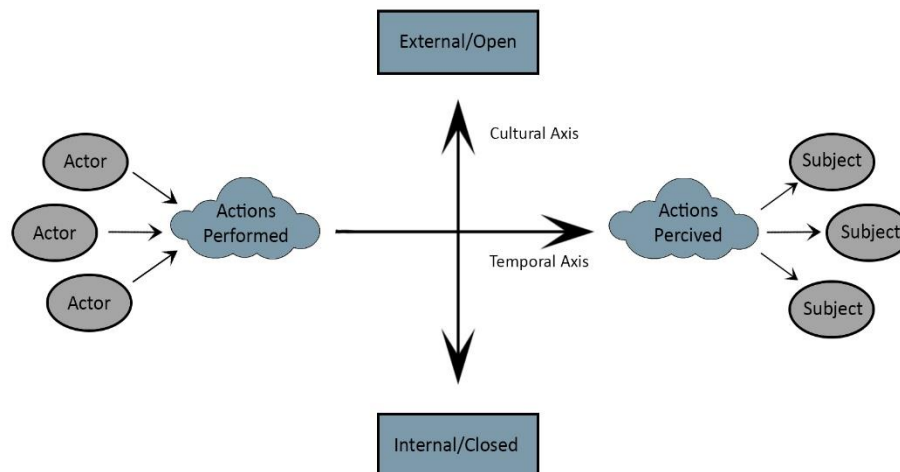


Figure 2 - Parameter-based view - Action to effect flow. Model developed by the authors.

The model breaks the process down into Dimensions, Participants and Events and distinguishes between two distinct elements within each category. Each of these categories are explained below:

The *temporal axis* describes the causal relation between *actions* performed by one or more *actors* and the *effects* of said actions as perceived by one or more *subjects*.

The cultural axis divides the temporal axis implicitly signifying the *actualisation of actions* in an abstract sense. It also describes the actions *organisational context*. For example, do actions take place in the *open* (between actors, user-centred etc.) or *internally*, within a single corporate entity? The cultural axis illustrates the inter-organisational culture, which in turn describes the actors and their relation to each other. For example, if they are part of the same company and thus working together towards a common goal, if they are merely part of the same supply chain and possibly have different albeit overlapping motivations or if they are totally unrelated and one simply paves the way for the other.

Although actors and subjects will, in many cases be the same, the model overall distinguishes between the two, in order to account for actions that may have collateral, or even entirely unexpected effects which affect subjects other than those intended.

Similarly, while actions are defined by the conscious intentionality with which they are performed (as opposed to incidental actions, which are more coincidental than strategic) the model also distinguishes between actions intended and perceived effects. Acknowledging that the effect of an action is seldom a single easily identified and objective effect. More often an action will result in a series of highly subjective perceived effects depending on the perspective of each subject affected. X

In practical terms the model describes innovation as a dynamic where companies select partners (actors) with the intent of performing certain actions to achieve a desired, albeit often subjective and/or non-linear, effect for certain subjects. This can be summarised in the following questions which oscillates between analytical and strategic perspective: Which actions were performed / What can be done?, Who performed the actions / By whom?, What is the effect / What are our goals? etc.

As a short example, we consider a small tourist hotel in a seasonal tourist destination in Northern Jutland. The hotel has 25 rooms and about 20 employees; a few more in the busy season. The hotel has a successful packaging deal, in which any stay at the hotel is mixed with a variety of experiences: trips, activities and fittingly themed gastronomical experiences at the hotel restaurant. The hotels interior decoration has been carefully designed to support the concept as well. All this, has led to the hotel becoming slightly more competitive compared to the other hotels and hospitality services in the area.

From an analytical perspective, we are interested in uncovering which circumstances and decisions have led the hotel to be in this situation. Presumably,

we may learn from their experiences so they may be converted and emulated in other businesses to similar effect.

From a strategic perspective, the questions could focus on uncovering opportunities so they may be prioritised before selecting those to systematically and reflectively explore. In contrast to the analytical perspective, this is typically done by the hotels staff and management while in the analytical perspectives pre-innovation state.

5. Findings

Seen together figure 1 and 2 represent an approach to innovation management, which is more dependent on an awareness of one's own, and others competencies or strengths and weaknesses coupled with the ability to strategically set clear and attainable goals in an iterative and reflective manner. As opposed to simply relying on incidental events and the ready availability of resources to gain resilience.

However, this does not take into account how exactly companies, especially small companies with limited resources to experiment, should go about developing their ability to work in this manner. In the mentioned studies a design thinking approach to innovation and management is suggested (Haslam, 2016)

Since this is a work in progress our findings at this stage remain at an abstract level which is hard to apply in practice. Although the theoretical foundation does offer a plausible ideal from which a practical roadmap could be developed it does not in itself present any practical tools which are likely to be used by MSE to develop their resilience. Adapting this theoretical foundation to a set of practical tools is the next step in addressing our research question. It is, however, not part of this paper.

6. Contribution & Practical implications

The main contributions of this paper are theoretical understandings of innovation and strategy in relation to digital disruption in MSE's. These understandings are condensed into two models, which suggest a dynamic strategic approach to innovation and thus potentially paving the way for a resilience for digital disruption for MSE's. The further focus of this research project is mainly practical in that its long-term purpose is to develop a series of practical tools and techniques that can be utilised by micro and small enterprises to not only build resilience towards digital disruption from other companies, but also potentially help them become disruptors themselves. Since this demographic represents such a large percentage of the European corporate landscape this could have a profound effect on the way to do business. However, this fully depends on the

extent to which the abstract, theoretical ideas presented here can successfully be applied in practice, which remains to be seen.

7. Areas for feedback and development

We welcome feedback and suggestions on three specific perspectives:

1. Is the theoretical perspective on innovation and strategy viable and are the sources selected the best suited for the tasks at hand?
2. Which is the best way to approach the process of developing the theoretical dimensions into a practical roadmap. Suggestions of process and methods are welcome.
3. Suggestions for methods and contexts for empirical testing are very welcome. We would be especially interested to hear if anyone have embarked on similar endeavours before us.

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